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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/372,667	08/11/1999	MARK LEE AHRENS	10990502-1	1716

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EXAMINER	
JONES, HUGH M	

ART UNIT	PAPER NUMBER
2128	19

DATE MAILED: 04/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/372,667	AHRENS ET AL.	
	Examiner	Art Unit	
	Hugh Jones	2128	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 January 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 26-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 26-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1, 26-33 of U. S. Application 09/372,667, filed 08/11/1999 are presented for examination.

Claim Interpretation

2. The claims have been provided the broadest, most reasonable interpretation. Applicants appear to be claiming a closed circuit video system using a IEEE 488 bus system for remote testing of DUTs.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> **The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.**

4. Claims 1, 26-33 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. This pertains to the lack of enabling disclosure relating to "analysis tool kit". It is interpreted that analysis tool kit includes, for example, oscilloscopes and logic analyzers.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1, 26-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over [Chandler et al. in view of the taking of Official Notice and in further view of Mann] or [Kamieniecki et al. or Ziegra et al. or Moser et al.] in view of Mann.

7. Chandler et al. disclose an automatic circuit board tester for testing for shorts, opens, and interconnected pins or nodes on a circuit board. The tester first classifies the nodes as being in one of three categories based upon the design of the board and the intended interconnection of the nodes. The categories of nodes are: (1) connected to ground; (2) interconnected to all other nodes in the test group; or (3) isolated from all other nodes. The circuit board tester has a testhead containing a plurality of test channels, each configured to be coupled to a node on the circuit board. The testhead utilizes a digital signal from a digital driver to drive the node at a predetermined voltage and a digital receiver to read the node voltage to determine if it is coupled to ground. Each test channel also includes a switch to connect the digital driver and receiver to the test node as well as a ground switch to selectively couple the node to ground. Various combinations of switch positions and testing sequences enables the circuit board tester to test all node connections and to ensure that the physical embodiment of the circuit board accurately reflects the circuit board design.

8. In particular, Chandler et al. discloses:

- connecting the DUT to a testing device (fig. 1-2; col. 3, line 21 to col. 4, line 24);

- connecting a remote controlling device to the testing device (fig. 1-2; col. 3, line 21 to col. 4, line 24);

- connecting a communications line (fig. 1-2; col. 3, line 21 to col. 4, line 24);

- establishing a communications link between remote controller and remote controlling device (fig. 1-2; col. 3, line 21 to col. 4, line 24);

- transmitting DUT data to remote controller (fig. 1-2; col. 3, line 21 to col. 4, line 24);

- controlling testing device using input from remote controller (fig. 1-2; col. 3, line 21 to col. 4, line 24);

- initializing, establishing and transmitting data/attribute of DUT (fig. 1-2; col. 3, line 21 to col. 4, line 24);

- forwarding instructions to remote controller and forwarding to testing device (fig. 1-2; col. 3, line 21 to col. 4, line 24);

9. Chandler et al. do not disclose use of "video cameras"

10. Official Notice is taken that it would have been obvious to one of ordinary skill in the art at the time of the invention to employ video cameras during remote testing of DUTs because this provides other sources of information to the user which would not be as apparent from, for example, only electrical signals. For example, during testing of semiconductor DUTs, a video signal could show smoke, indicating overheating of the DUT.

11. Chandler further does not recite an "analysis tool kit".

12. Mann discloses the use of a logic analyzer in remote test situations. Mann disclose a remotely accessible Integrated Debug Environment which permits a user having only a computer and an Internet connection to remotely access an IDE configured for operating and debugging a selected target microprocessor or microcontroller. An IDE is set up, including a host computer which operates as a web server and as a target/debug controller. One or more target processors may be connected to the host computer, along with debug equipment, such as logic analyzers, ICE equipment, overlay memory, etc. The host computer includes toolsets that correspond to the available target processor(s). In order to execute or debug code on a selected target processor, a user connects to the host computer using a web browser, with which the user can determine the availability of target processors and other pertinent information. The user can then download user interface software that will enable the user to implement an appropriate user interface on his computer, using the Internet to communicate with the host computer. Once the user interface is set up, the remote user can use the IDE system as though he were a local user, using control techniques familiar to those skilled in the art, to execute or debug software on the target processor. In preferred embodiments, the user interface is transmitted to the user as a Java bytecode, which is executable on most general purpose personal computers and workstations using widely available Java interpreters. See fig. 1-6.

13. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a logic analyzer as necessary, because some DUTs are complex logic circuits when can only be tested with logic analyzers.

14. Kamieniecki et al. disclose an automated signal generator apparatus which allows ***testing of remotely-controlled electronic devices*** to verify functionality and reliability, or for product set-up, initialization or configuration. The apparatus simulates a person pressing the keys on a remote control key pad, and can simulate key press sequences, key press duration, and time between key presses. Other human interfaces may also be simulated. The apparatus can be continuously driven by an external computer in a slaved mode, or can store test instructions in an internal memory to operate in a standalone mode. Test instructions, which may be written in a macro script language, are processed by a microprocessor to provide a control signal to, e.g., an infrared (IR) transmitter. The IR transmitter can control one or more electronic devices which are under test. The transmitter may use a wide angle IR beam, or a plurality of separate transmitters for testing of a plurality of electronic devices at the same time. In a human learning mode, control signals from a human interface are processed to provide time compression or repetition of a fixed control sequence.

15. In particular, Kamieniecki et al. disclose:

- connecting the DUT to a testing device (fig. 1; col. 2, lines 20-28; col. 3, lines 28-35; col. 4, lines 7-63; col. 5, line 47 to col. 6, line 62; col. 7, lines 16-40; col. 9, line 54 to col. 10, line 13);

- connecting a remote controlling device to the testing device (fig. 1; col. 2, lines 20-28; col. 3, lines 28-35; col. 4, lines 7-63; col. 5, line 47 to col. 6, line 62; col. 7, lines 16-40; col. 9, line 54 to col. 10, line 13);

- connecting a communications line (fig. 1 [# 125, 170]; col. 2, lines 20-28; col. 3, lines 28-35; col. 4, lines 7-63; col. 5, line 47 to col. 6, line 62; col. 7, lines 16-40; col. 9, line 54 to col. 10, line 13);

- using a video camera (col. 7, lines 27-40);

- establishing a communications link between remote controller and remote controlling device (fig. 1; col. 2, lines 20-28; col. 3, lines 28-35; col. 4, lines 7-63; col. 5, line 47 to col. 6, line 62; col. 7, lines 16-40; col. 9, line 54 to col. 10, line 13);

- transmitting DUT data to remote controller (fig. 1 [# 180]; col. 2, lines 20-28; col. 3, lines 28-35; col. 4, lines 7-63; col. 5, line 47 to col. 6, line 62; col. 7, lines 16-40; col. 9, line 54 to col. 10, line 13);

- controlling testing device using input from remote controller (fig. 1; col. 2, lines 20-28; col. 3, lines 28-35; col. 4, lines 7-63; col. 5, line 47 to col. 6, line 62; col. 7, lines 16-40; col. 9, line 54 to col. 10, line 13);

- initializing, establishing and transmitting data/attribute of DUT (fig. 1; col. 2, lines 20-28; col. 3, lines 28-35; col. 4, lines 7-63; col. 5, line 47 to col. 6, line 62; col. 7, lines 16-40; col. 9, line 54 to col. 10, line 13);

- forwarding instructions to remote controller and forwarding to testing device (fig. 1 [# 180]; col. 2, lines 20-28; col. 3, lines 28-35; col. 4, lines 7-63; col. 5, line 47 to col. 6, line 62; col. 7, lines 16-40; col. 9, line 54 to col. 10, line 13).

16. Ziegra et al. disclose a method and system for remote assistance and review of an operator working with complex equipment. An operator at a station at a local site is coupled to an advisor at a station at a remote site, so that the advisor may view and

hear the same stimuli as the operator, that the advisor and operator may communicate, and that the advisor may view and control the local apparatus. The operator has limited training or otherwise in need of support, and may be a field engineer or technician. The advisor has extensive training and able to provide technical support, and generally has extended and specialized knowledge with regard to the local apparatus, and may be a technical expert on the local apparatus. The operator may comprise an individual with technical training and knowledge, but lacking managerial or other authority, while the advisor comprises an individual with such authority. The operator communicates with the advisor by visual cues or ordinary speech, while the advisor views and listens to the local apparatus. The advisor gives advice to the operator for manipulating the local apparatus, and manipulates the local apparatus directly by means of the control signal or data signal feeds. Thus, the operator may operate the local apparatus as if the advisor were peeking over his shoulder; viewed alternatively, the advisor may operate the local apparatus as if the operator were an intelligent waldo. Alternatively, an intermediate advisor may advise/control the operator and be advised/controlled by a high-level advisor. See fig. 1-5 and corresponding text.

17. Moser et al. disclose a remote test unit for testing and conditioning one or more telephone lines includes multiple electronically erasable flash memory banks, which contain respective versions of the operating system employed by the test unit's micro-controller. An operating system modification routine employed by the host processor of a remote site allows the functionality of the remote test unit to be selectively modified by electronically installing an upgraded or downgraded version of the operating system, or

by electronically selectively activating or deactivating one or more operational features of the currently active operating system. See fig. 1-2 and corresponding text.

18. Kamieniecki et al. or Moser et al. or Ziegra et al. do not recite an "analysis tool kit".

19. Mann discloses the use of a logic analyzer in remote test situations. Mann disclose a remotely accessible Integrated Debug Environment which permits a user having only a computer and an Internet connection to remotely access an IDE configured for operating and debugging a selected target microprocessor or microcontroller. An IDE is set up, including a host computer which operates as a web server and as a target/debug controller. One or more target processors may be connected to the host computer, along with debug equipment, such as logic analyzers, ICE equipment, overlay memory, etc. The host computer includes toolsets that correspond to the available target processor(s). In order to execute or debug code on a selected target processor, a user connects to the host computer using a web browser, with which the user can determine the availability of target processors and other pertinent information. The user can then download user interface software that will enable the user to implement an appropriate user interface on his computer, using the Internet to communicate with the host computer. Once the user interface is set up, the remote user can use the IDE system as though he were a local user, using control techniques familiar to those skilled in the art, to execute or debug software on the target processor. In preferred embodiments, the user interface is transmitted to the user as a

Java bytecode, which is executable on most general purpose personal computers and workstations using widely available Java interpreters. See fig. 1-6.

20. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a logic analyzer as necessary, because some DUTs are complex logic circuits when can only be tested with logic analyzers.

Response to Arguments

21. Applicant's arguments filed 1/30/2004 have been fully considered but they are not persuasive.

22. Applicant's arguments have been fully considered but are not persuasive. Applicants refer to various words/phrases ("analysis tool kit", for example) and argue that the cited art does not disclose such features. Applicants have not persuasively argued how the features are novel and non-obvious over the prior art of record. The Examiner therefore carefully reviewed the specification to determine the meaning of "analysis tool kit", for example. The Examiner respectfully submits that it does not appear to be defined in an unambiguous manner and is unable to determine a precise meaning.

23. Applicants had indicated that support for the amendments to the claims and the new claims is to be found in Figs. 2-6 and page 8, line 3 to page 14, line 14. The Examiner respectfully submited that such material constitutes the bulk of the specification. The Examiner requested that Applicants point out the support with some

particularity in order to advance prosecution. The Examine rhas reviewed the indicated portions and does not find support for the analysis tool kit.

24 Applicant's arguments with respect to the prior art are noted but are moot in view of the new art rejections which are applied against the amended/new claims.

Conclusion

25. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

26. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

27. Any inquiry concerning this communication or earlier communications from the examiner should be:

directed to:

Dr. Hugh Jones telephone number (703) 305-0023, Monday-Thursday 0830 to 0700 ET, ***or*** the examiner's supervisor, Kevin Teska, telephone number (703) 305-9704. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist, telephone number (703) 305-3900.

mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 308-9051 (for formal communications intended for entry)

or (703) 308-1396 (for informal or draft communications, please label "*PROPOSED*" or "*DRAFT*").

Dr. Hugh Jones

Primary Patent Examiner

April 20, 2002

HUGH JONES PH.D.
PRIMARY PATENT EXAMINER
TECHNOLOGY CENTER 2100